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RE-FAST1 - 180 compounds:

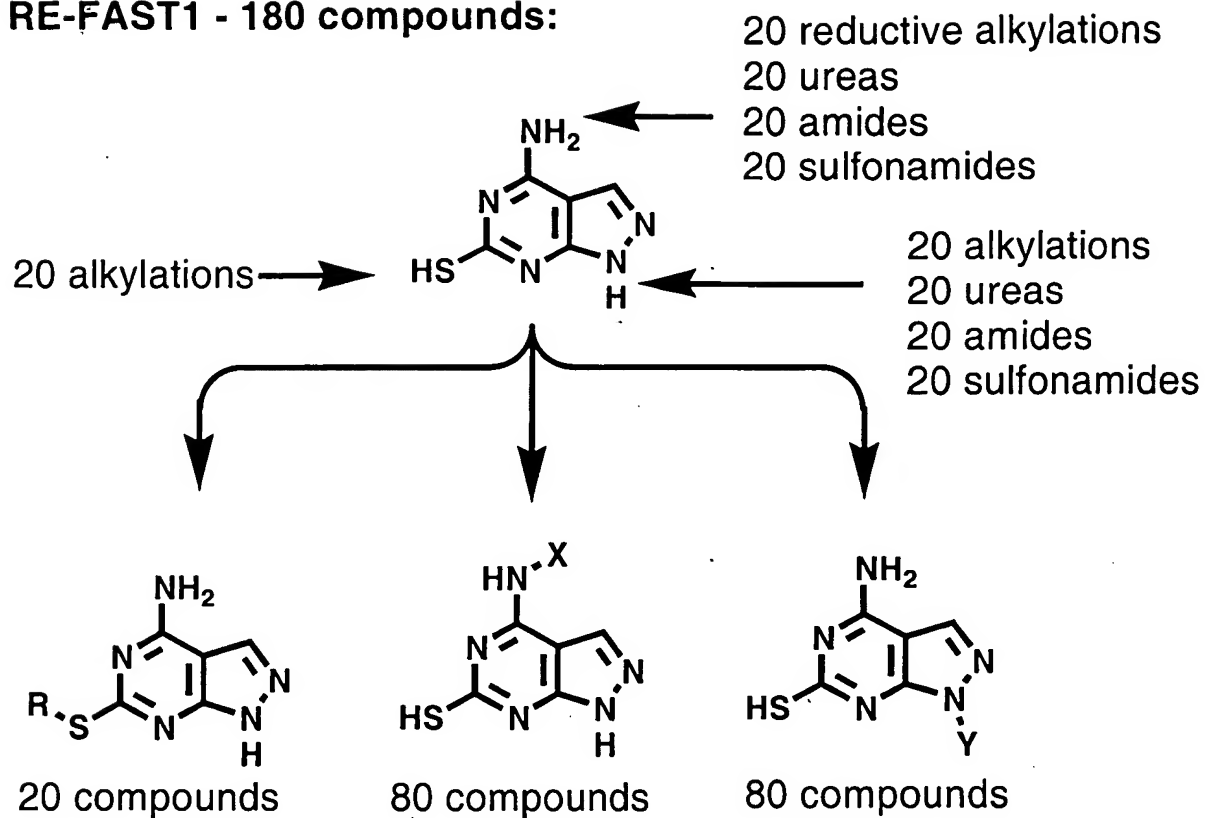
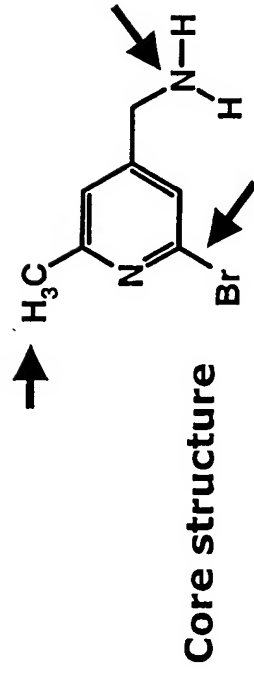


FIGURE 1

Fig. 2



Synthesize 10 – 20
derivatives at each "handle"
Total library based on this
core ~ 50 – 100 compounds

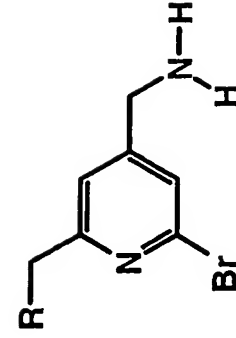
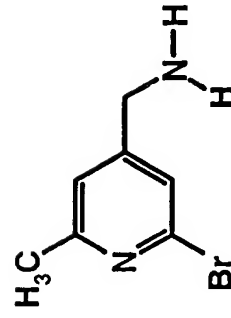
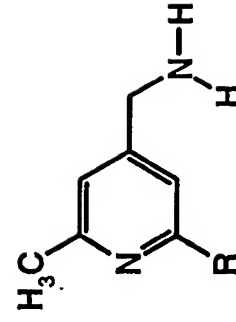
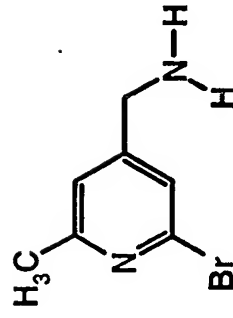
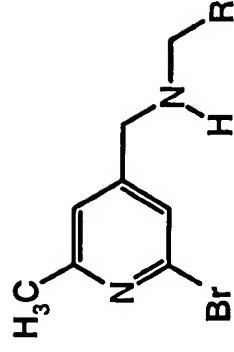
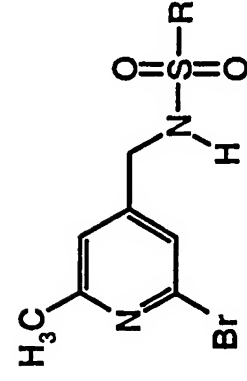
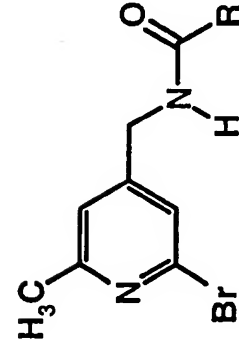
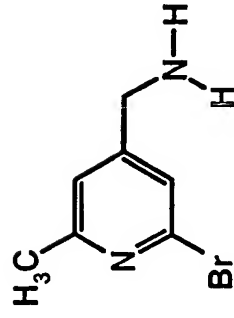


Fig. 3

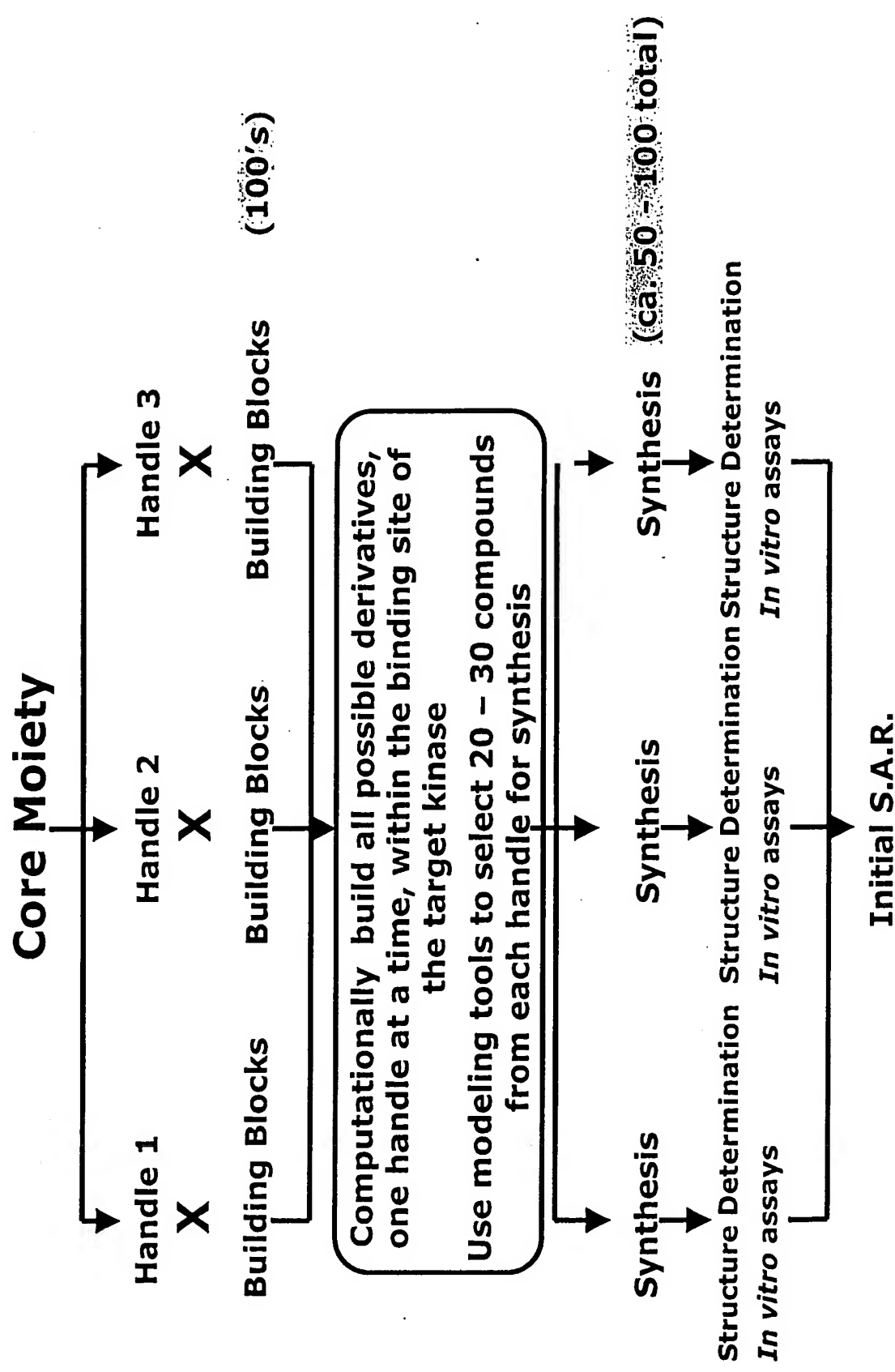
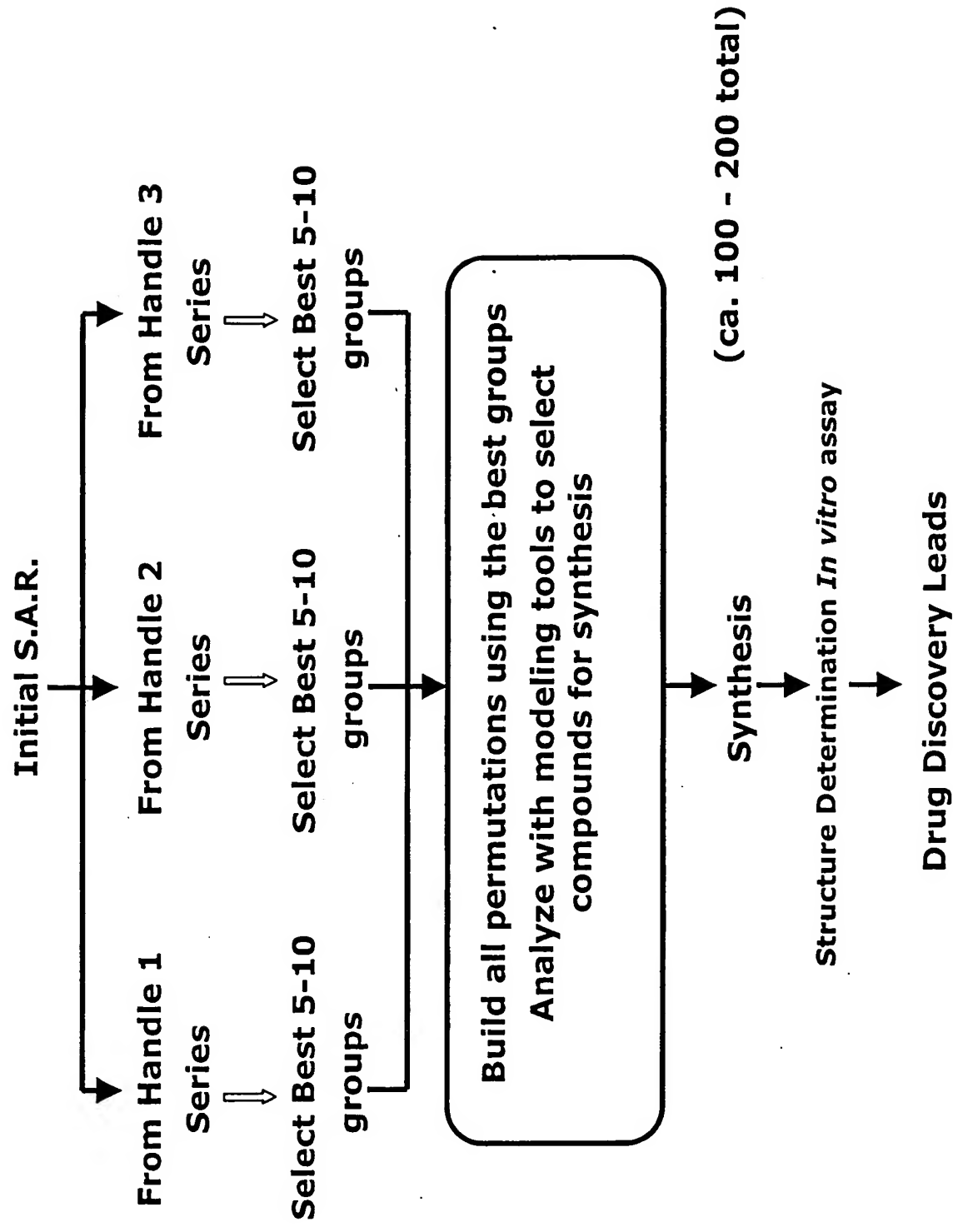


Fig. 4



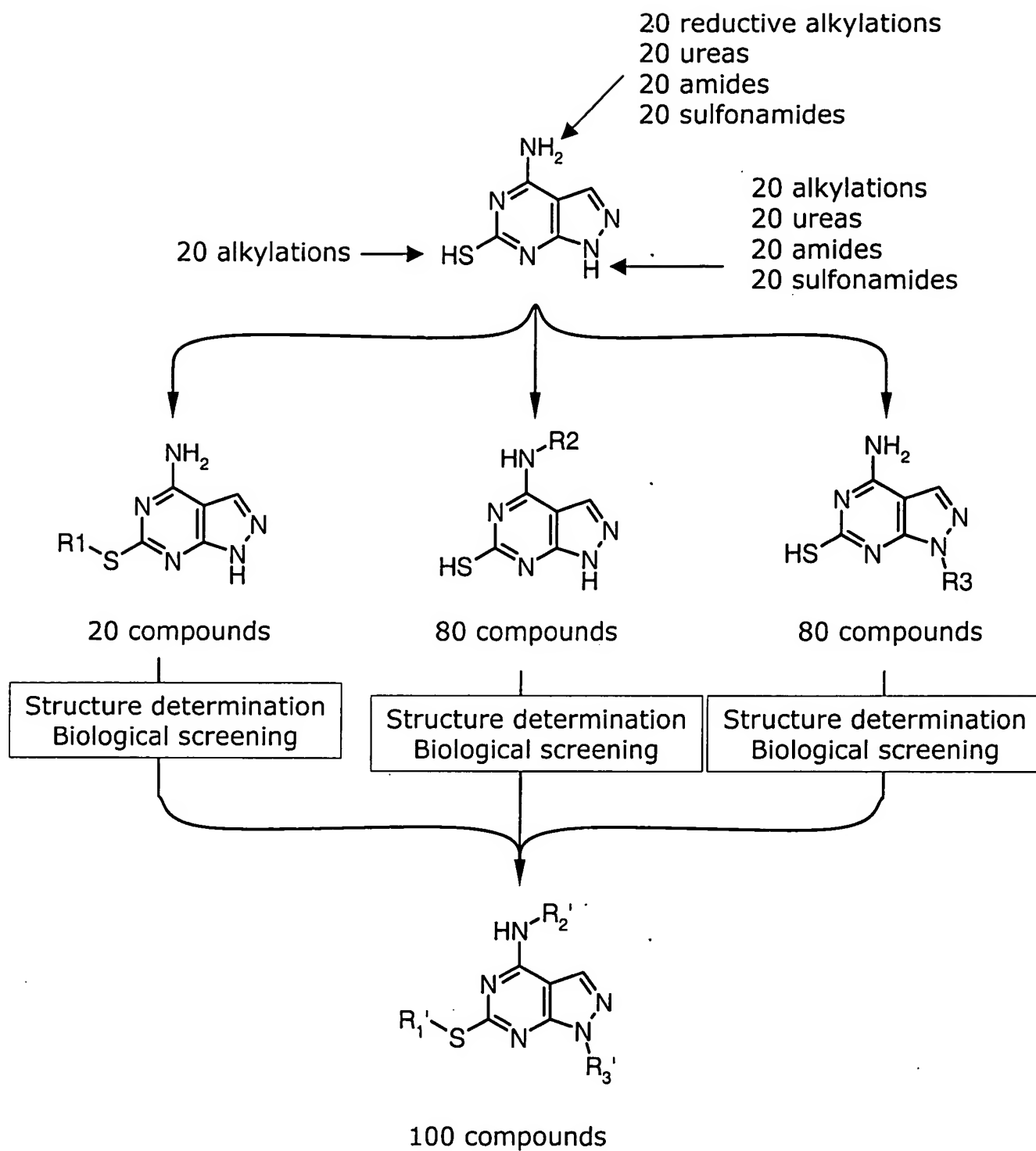


Fig. 5

FIG. 6

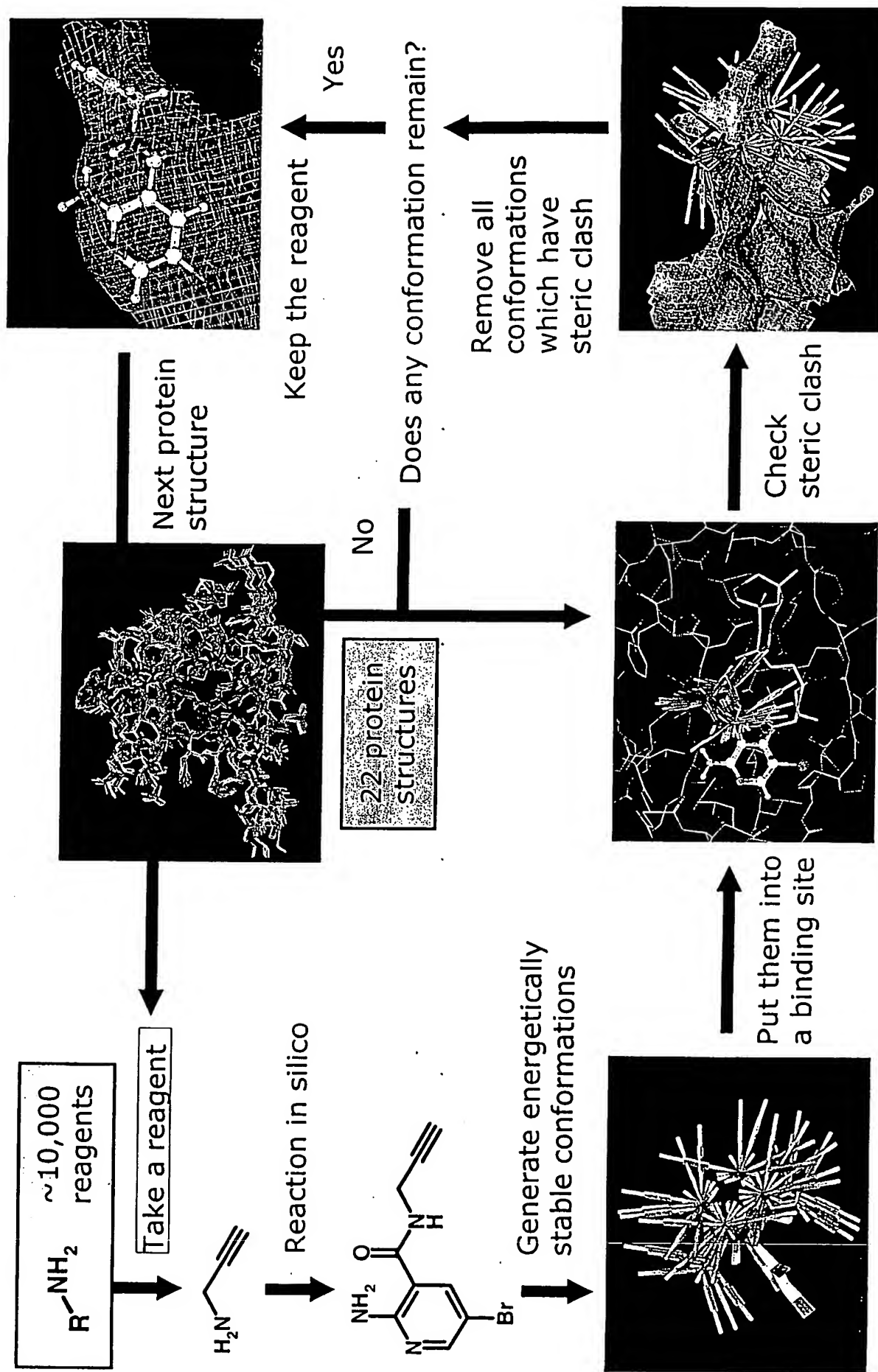


Figure 7

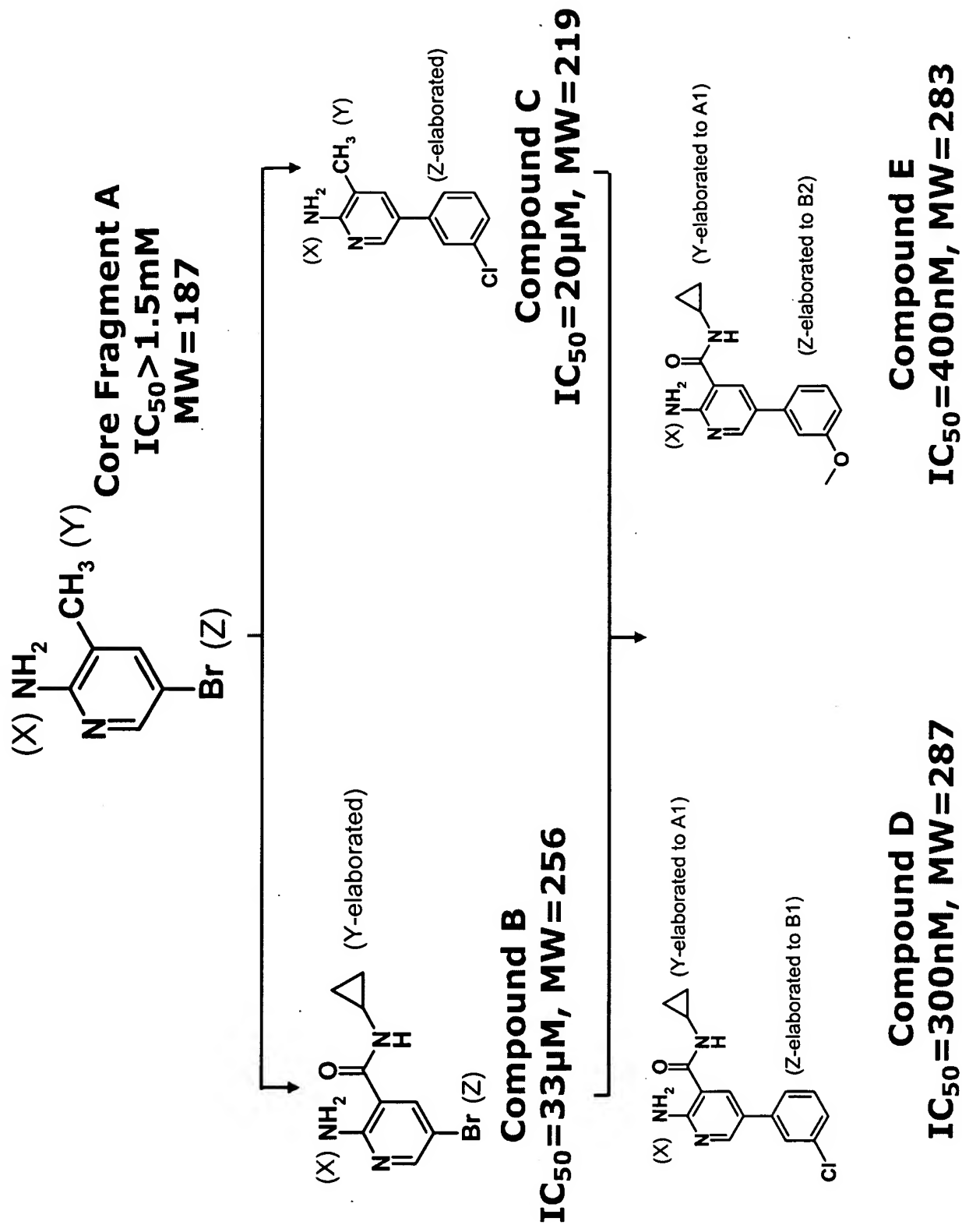


FIGURE 8

Palladium-catalyzed reactions

- Suzuki
- Heck
- Sonogashira

Amine chemistry

- Amide
- Sulfonamide
- Urea
- Carbamates
- Reductive alkylation
- Buchwald aryl amine formation

Alcohol chemistry

- Ester
- Mitsunobu
- Carbamate

Phenol chemistry

- Mitsunobu
- SN2
- Mannich
- Aryl ether

Aryl/Heteroaryl halide chemistry

- Suzuki
- Heck
- Sonogashira
- Lithium chemistry
- Magnesium (Grignard) chemistry
- Displacement with amine, alkoxide etc

Alkyl halide chemistry

- SN2 with amine, phenoxide, etc.
- Wittig

Active alpha carbon chemistry

- Alkylation, displacement of halides
- Double formation with alpha CH₂
- Addition to carbonyl compounds

Active ring NH

- Alkylation
- Mitsunobu
- Catalyzed reaction with aryl halide

Double bond formation

- Cycloaddition

Oxidation of double bond

- DMDO oxidation
- Transition metal catalyzed oxidation